

MCS Series<sup>®</sup>  
It puts you closer  
to true sound.



# True-to-life sound.

## Take command of every performance.

MCS Series® components are built with one objective in mind. Musical truth. From receivers, tuners and amplifiers to cassette decks, speakers and turntables, MCS represents our ultimate in sonic quality. Electronic switches, tone arms, chassis, speaker coils, circuit boards, cabinets, are all built to unrelenting MCS standards, detail by detail, unit by unit. Combined with the latest in innovative audio design to put you in control of sophisticated true-to-life sound.

## Component compatibility.

Putting together a great high fidelity system is a personal choice. Depending on the music you prefer, the space you have and the amount of money you want to spend. That's why we've made MCS components compatible in sound as well as in design. Built with flexibility in case you want to add or change components. So the audio system of your choice is more than a mere match-up. It's a system designed to perform as a unit. The result: a quality sound at an affordable price.

## Our warranty. One of the best.

- Full 5 year warranty on MCS Series® speakers
- Full 3 year warranty on MCS Series® components

Within 10 days of purchase of MCS Series® speakers, single or multiple play turntables, receiver, tuner, amplifier, tape deck we will, at our option, repair or replace any item of this modular component system that is defective in material or workmanship. Just return it to a JCPenney store with the original packing, carton, and accessories. For the balance of the 5 year warranty on MCS Series® speakers and the 3 year warranty on MCS Series® components, we will repair any item that is defective in material or workmanship. Parts and labor are included. Just return it to a JCPenney service center for service.

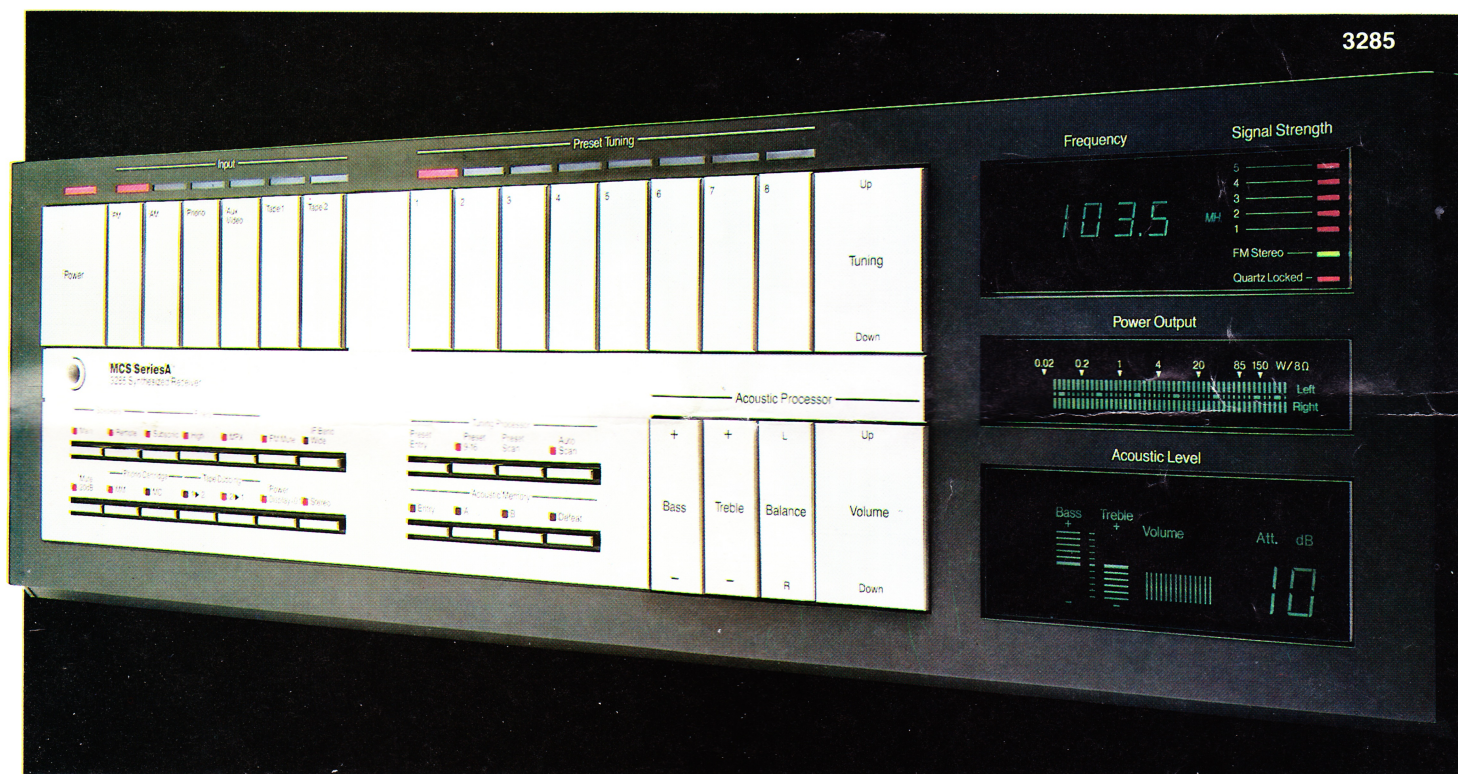




# 85 watt stereo receiver

## Choose the power you need.

Whether you need 25 or 85 watts per channel, MCS receivers are distinguished by a balanced integration of the tuner and amplifier sections to give beautifully realistic musical reproduction. All offering features like MOSFET front ends for high sensitivity, low noise and good linearity, IF filters for improved FM station stability, phase locked loop multiplex detectors to minimize noise and low distortion. Created for the music lover who demands the most from the heart of a high fidelity system.



**3285 Power:** 85 watts RMS minimum per channel, 2 channels driven at 8 ohms, 20-20,000 Hz with not more than 0.005% total harmonic distortion.

### 3285 Receiver features:

**Synthesized Quartz Lock Tuning:** Electronically tunes desired radio signals quickly and accurately. Quartz crystal automatically "locks" selected frequency with minimal drift and low distortion.

**Acoustic Memory:** Two memory positions into which bass, treble and filter conditions can be preset.

**16 Station Memory Presets:** Stores any combination of AM and FM programs up to 16 stations for instant tuning at the touch of a button.

**Pre-Set Scan:** Allows you to hear a 5 second sample of each of the 16 station pre-sets.

**Fully Electronic Feather Touch Tuning:** Precisely tunes automatically or manually with the ease of pushbutton operation.

**Concentrated Fluorescent Tube Display:** Displays digital frequency readout, left and right channel power output level, bass and treble response, balance and volume levels.

**High-Speed Switching DC Power Amp:** Eliminates switching distortion.

**Other Features:** FM wide and narrow IF band selection, mute control, subsonic and high filters.

**MCS<sup>®</sup>**  
Series



# 60 watt stereo receiver 45 watt stereo receiver

① 60W  
8732 SPK 1 } 1048<sup>50</sup>  
6007711 } 899<sup>50</sup>

② 60W  
6720 417 } 1319<sup>50</sup>  
8330 SPK 1 } 999<sup>50</sup>

3260



3249

**3260 Power:** 60 watts RMS minimum per channel, 2 channels driven at 8 ohms, 20-20,000 Hz with not more than 0.02% total harmonic distortion.

## 3260 Receiver features:

**Synthesized Quartz Lock Tuning:** Quartz crystal constantly corrects tuning errors, for low distortions, minimal drift.

**12 Station Memory Presets:** Store 6 FM and 6 AM stations for instant recall at the touch of a button.

**AM/FM Digital Frequency Readout:** No more dial scale. Fluorescent readout indicates tuning with precision.

**Autoscan:** Allows tuner to automatically scan every frequency and lock in at strongest station.

**Fully Electronic Touch Control Tuning:** Tune automatically or manually with ease of pushbutton selection.

**Instantaneous and Independent LED Wattage meter:** Instantaneous information on power output.

**Other Features:** Loudness switch, LED signal strength meter, LED function indicators, MPX filter, built-in protection fuse.

**3249 Power:** 45 watts RMS minimum per channel, 2 channels driven at 8 ohms, 20-20,000 Hz with not more than 0.02% total harmonic distortion.

## 3249 Receiver features:

**Synthesized Quartz Lock Tuning:** Quartz crystal corrects drift and tuning errors, locks in on signal.

**12 Station Memory Presets:** The touch of a button selects any of 6 AM and 6 FM stations.

**AM/FM Digital Frequency Readout:** Displays the exact frequency.

**Autoscan:** Automatically scans every frequency, then locks in at the strongest signal.

**Electronic Touch Control Tuning:** Zeroes in on the selected frequency instantaneously, or lets you tune manually.

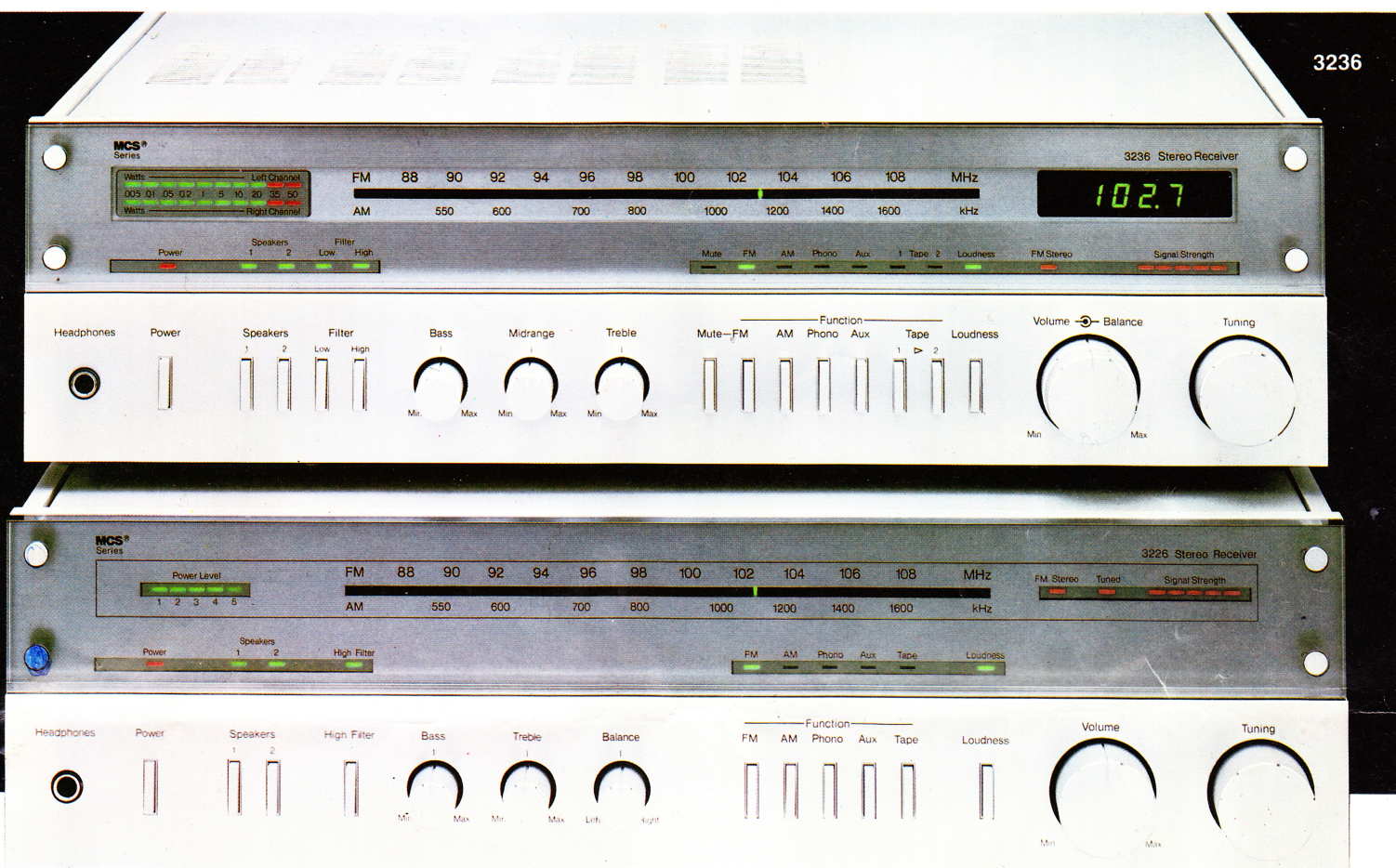
**Tape Monitor/Dubbing:** Lets you hook up two tape decks and tape from one to the other.

**Other Features:** LED signal strength indicator, LED wattage meters, built-in protection fuses.



OZZY

# 35 watt stereo receiver 25 watt stereo receiver



3236

3226

**3236 Power:** 35 watts RMS minimum per channel, 2 channels driven at 8 ohms, 20-20,000 Hz with not more than 0.04% total harmonic distortion.

**3236 Receiver features:**

**AM/FM Digital Frequency Readout:** Lets you tune to any station with ease and accuracy.

**Flywheel Tuning:** Built for precision and ease of operation.

**Midrange Control:** Emphasizes or de-emphasizes critical frequencies around the vocal range.

**LED Signal Strength Meter:** Helps you rapidly find the strongest AM and FM stations.

**Other Features:** FM mute, low and high filters, tape 1 and 2, loudness control.

**3226 Power:** 25 watts RMS minimum per channel, 2 channels driven at 8 ohms, 20-20,000 Hz with not more than 0.04% total harmonic distortion.

**3226 Receiver features:**

**Loudness Control:** Allows you to boost bass and treble for realistic sound at lower volumes.

**LED FM Stereo Light:** Alerts you to stereo broadcasts.

**LED Wattage Meter:** Shows you the power being produced.

**LED Tuning Indicator:** Lets you tune to the exact frequency desired.

**Other Features:** Speaker 1 and 2, high filter, bass and treble controls.



# Separate tuner and amp

## Make it a 60 watt system.

When you buy separates, you get more than high performance integrated amplifiers and tuners. You get the flexibility to expand your system at your own pace. Allowing you to upgrade selectively. If you want to improve the FM performance of your system, do so by upgrading only the tuner. If you want more power, replace the amplifier. So you can assemble a personal stereo system for your own distinct sound.

Yet, putting together a complete system doesn't have to be a time consuming ordeal. You can find everything you want with MCS components. All of which are made-for-each-other in sound as well as look. Like this 60 watt system below or the 20 watt system on the next page. It's the sure way to choose a quality system in a minimal amount of time.



**3860 Power:** 60 watts RMS minimum per channel, 2 channels driven at 8 ohms, 20-20,000 Hz with not more than 0.05% total harmonic distortion.

### 3860 Amp features:

**High Filter:** Reduces high frequency noise, hiss from tapes, worn records and weak FM stations.

**Subsonic Filter:** Cut out low frequency noise, turntable rumble, hum, warped records.

**Loudness Switch:** Boosts bass and treble at low volume to maintain realistic sound.

**Tape Monitor:** Lets you listen to the source program as it's being recorded on tape.

**LED Wattage Indicator:** Tells you instantaneous power output to speakers.

**Main and Remote Speaker Selector:** Lets you play two sets of speakers together or independently.

**Other Features:** Treble and bass, meter range and balance controls.

### 3760 Tuner features:

**Synthesized Quartz Lock Tuning:** Quartz crystal constantly corrects tuning errors, for low distortions, minimal drift.

**16 Station Memory Presets:** Store 8 FM and 8 AM stations for instant recall at the touch of a button.

**Auto Memory:** Automatically selects and presets the strongest broadcast stations, 8 FM-8 AM.

**AM/FM Fluorescent Digital Frequency Readout:** Indicates tuning with precision.

**Fully Electronic Touch Control Tuning:** Tune automatically or manually with the ease of pushbutton operation.





# Separate tuner and amp



3822 3722

## Our complete 20 watt system.

This 20 watt system has been carefully assembled for the person who wants outstanding performance, contemporary design and ease of operation at an affordable price. The tuner and amplifier are combined with a matching cassette deck; turntable, speakers, and space-saver audio rack (6395) are added to complete the package.

Amp 3822, Tuner 3722, see below.

Cassette deck 3522, see page 11.

Belt-drive turntable 6202, see page 17.

High-efficiency speakers 8231, see page 14.

**3822 Power:** 20 watts RMS minimum per channel, 2 channels driven at 8 ohms, 20-20,000 Hz with not more than 0.1% total harmonic distortion.

### 3822 Amp features:

**Bass and Treble Controls:** Adjusts to provide the tonal emphasis you prefer.

**Loudness Control:** Allows you to boost bass and treble for realistic sound at lower volumes.

**LED Power Level Indicators:** Provides constant information on the power output of your system.

**Other Features:** Microphone mixing level control.

### 3722 Tuner features:

**AM/FM Digital Frequency Readout:** Lets you tune to any station with ease and accuracy.

**LED Signal Strength Meter:** Indicates when you have the best reception possible.

**FM Muting Switch:** Reduces background noise between FM stations.

**Flywheel Tuning:** Built for precision and ease of operation.

**LED FM Stereo Light:** Alerts you to stereo broadcasts.

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# Casseiver/Graphic equalizers



3434

## Cassette plus receiver.

Now you can have a high fidelity cassette deck and receiver in one unit without sacrificing outstanding performance. It's the latest technological innovation: the casseiver. Plus, it's packed with features and saves you space and extra cost.

**3434 Power:** 25 watts RMS minimum per channel, 2 channels driven at 8 ohms, 20-20,000 Hz with not more than 0.9% total harmonic distortion.

### Receiver features:

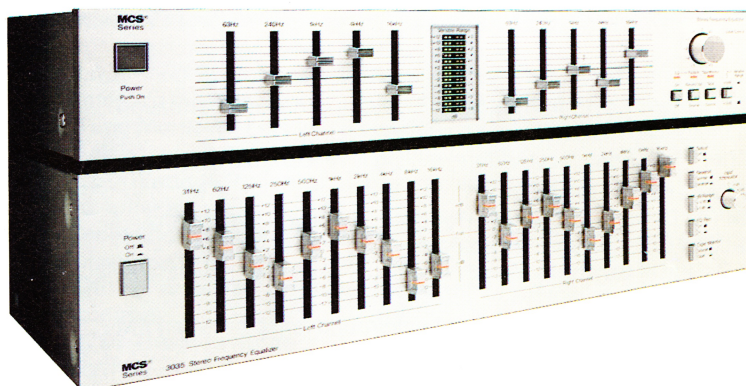
**Synthesized Quartz Lock Tuning:** Quartz crystal constantly corrects tuning errors, for low distortions, minimal drift.

**12 Station Memory Presets:** Store up to 6 FM and 6 AM stations for instant recall.

**AM/FM Digital Frequency Readout:** Indicates tuning with precision.

**Fully Electronic Touch Control Tuning:** Tune automatically or manually for ease of operation.

3032



3035

**Equalizer Features:** Bass, treble, balance controls, LED signal strength meter, LED function indicators, built-in protection fuse.

### Cassette features:

**Soft-Touch Transport Buttons:** Quiet, easy operation.

**Dolby\* Noise Reduction System:** Minimizes tape hiss without disturbing music.

**LED Record Level Meters:** For easy, visual check on input and adjustment.

**Metal Tape Capabilities:** Allows you to record or playback on high grade tapes with better frequency response.

**Equalizer Features:** Digital tape counter with reset, record level controls.

\*Registered Trademark of Dolby Laboratories Licensing Corp.

## Individualized sound.

When the usual tone controls like basic bass and treble aren't enough to give you an individualized sound, a graphic equalizer is the answer. It allows you to "fine tune" your sound system by boosting or lowering specific frequencies across the audible sound spectrum.

**3032 Frequency Response:** 5-100,000 Hz at 0.02% total harmonic distortion.

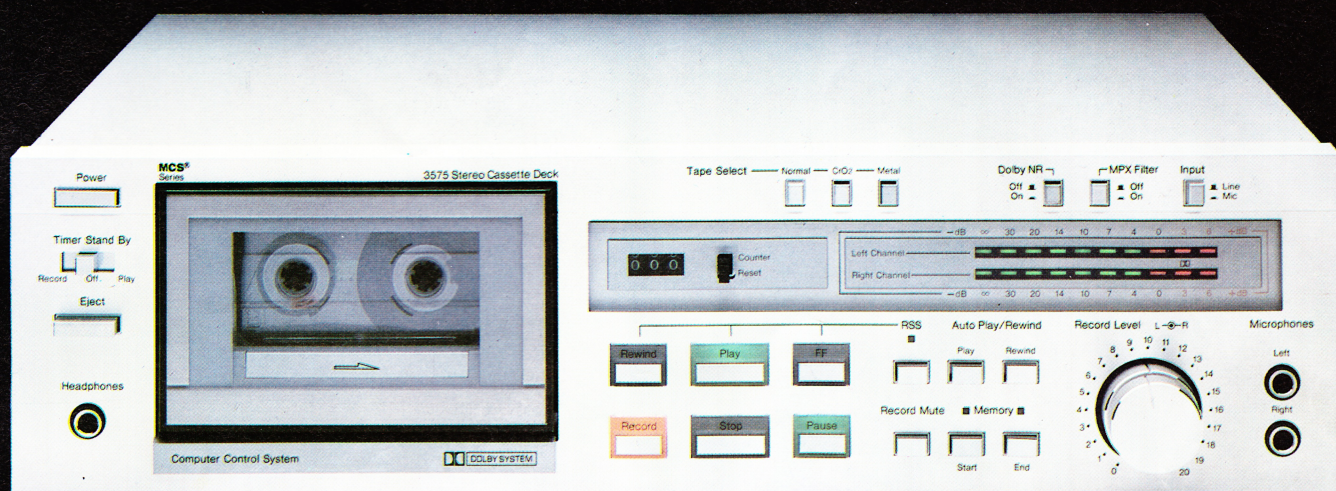
**3032 Equalizer Features:** Two independent 5-band equalizers, tape monitor, variable range selector, LED variable range indicators.

**3035 Frequency Response:** 10-35,000 Hz at 0.008% total harmonic distortion.

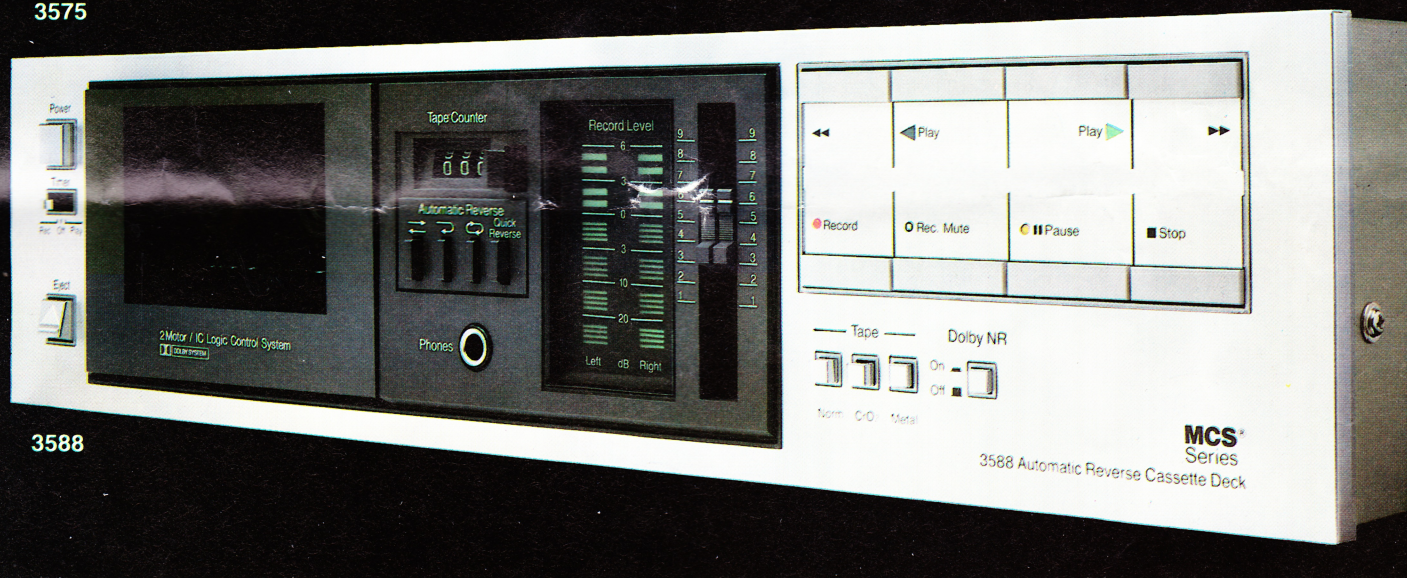
**3035 Equalizer Features:** Two independent 10-band equalizers, defeat, reverse, dB range, EQ-record switch, tape monitor, input attenuator controls.



# Cassette decks



3575



3588

## The time for taping is now.

Now that cassette tapes are in such justified demand, maybe it's time to invest in a MCS cassette deck. Playing pre-recorded tapes superbly and allowing you to make high-quality tapes of your own. All MCS units offer outstanding playback and recording plus Dolby\* noise reduction. In advanced models look for metal tape capability, soft touch function switches and auto reverse.

### 3575 Cassette deck features:

**Computer-Controlled Feather Touch Operation:** For rapid intermode switching.

**3-DC Motor Mechanism:** Micro computer sends information to motors for quiet, smooth operation.

**Programmable Random Search Selector:** Pre-set the tape deck to play only your favorite selections.

**Auto Play and Rewind:** Automatically rewinds and/or plays one side of tape.

**Dolby\* Noise Reduction:** Minimizes hiss without disturbing recorded music.

**Tape Selector:** Adjusts deck to maximize performance of traditional, metal or CrO<sub>2</sub> tapes.

**Other Features:** Record mute, MPX filter, timer stand-by capability.

### 3588 Cassette deck features:

**Auto Reverse Mechanism:** Allows playback or recording on both sides of a cassette tape without having to turn it over.

**Continuous Auto Reverse Control:** Automatically repeats play of both sides of the tape continuously.

**Manual Reverse Control:** Changes tape side and direction from any point on a loaded tape.

**Soft-Touch Transport Buttons:** Quiet, easy operation.

**Dolby\* Noise Reduction:** Minimizes hiss without disturbing recorded music.

**Other Features:** Timer stand-by capabilities, digital counter with reset, record mute control.



# Cassette decks



## 3549 Cassette deck features:

**Dolby\* "B" and "C" Noise Reduction System:** Dolby\* "B" minimizes tape hiss while Dolby\* "C" offers additional noise reduction over an increased frequency range.

**Soft Touch Transport Buttons:** Quiet, easy operation.

**Fluorescent Left/Right Record Level Meters:** Instantaneous, not average, readings.

**Metal Tape Capabilities:** Choose setting for metal or traditional tapes.

**Automatic Shut-Off:** Automatically shuts off deck at the end of one side of the tape.

**Other Features:** Digital counter with reset, record mute.

## 3555 Cassette deck features:

**Soft Touch Mechanism:** Feather touch operation helps protect delicate tapes.

**Fluorescent Left/Right Record Level Meters:** Instantaneous, not average, readings.

**Metal Tape Capabilities:** Choose setting for metal or traditional tapes.

**Dolby\* Noise Reduction:** Minimizes tape hiss.

**Digital Tape Counter with Reset:** Tells you instantly what part of the tape is playing.

## 3554 Cassette deck features:

**Soft-Touch Transport Buttons:** Quiet, easy operation.

**Metal Tape Capabilities:** Adjusts for playing metal, traditional or CrO<sub>2</sub> tapes.

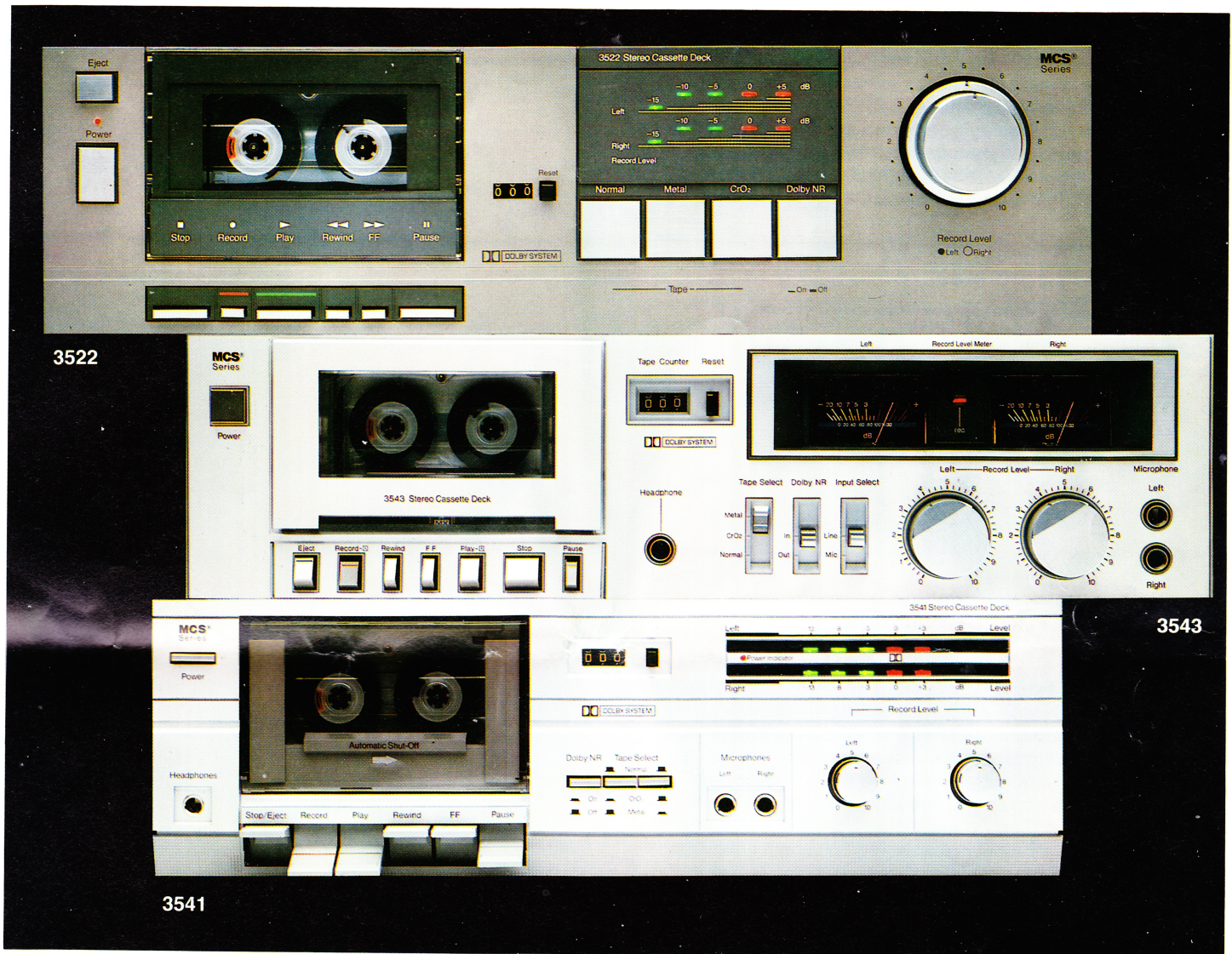
**Dolby\* Noise Reduction System:** Minimizes tape hiss without disturbing music.

**VU Meter and Controls:** For visual check on both input and adjustment to proper recording level.

**Other Features:** Digital tape counter with re-set, LED recording light.



# Cassette decks



## 3522 Cassette deck features:

**Soft Touch Mechanism:** Soft touch operation helps protect delicate tapes.

**LED Left/Right Record Level Meters and Controls:** For visual check and control of input level.

**Metal Tape Capabilities:** Choose setting for metal or traditional tapes.

**Dolby® Noise Reduction:** Minimizes tape hiss.

**Digital Tape Counter with Reset:** Tells you instantly what part of the tape is playing.

**DC Servo Motor:** A smooth, quiet-running motor built to minimize wow and flutter.

\*Registered Trademark of Dolby Laboratories Licensing Corp.

## 3543 Cassette deck features:

**Soft Touch Transport Buttons:** Quiet, easy operation.

**Metal Tape Capabilities:** Adjust for playing metal or traditional cassette tapes.

**Dolby® Noise Reduction System:** Minimizes tape hiss without disturbing music.

**Two VU Meters:** Helps achieve distortion-free recordings by warning when input is too high.

**Other Features:** Digital tape counter with re-set, LED recording light, automatic shut-off.

## 3541 Cassette deck features:

**Metal Tape Capabilities:** Choose setting for newest wide-frequency metal or traditional tapes.

**Dolby® Noise Reduction System:** Minimizes tape hiss.

**LED Left/Right Record Level Meters and Controls:**

Capability to adjust right and left channels for better recordings.

**Digital Tape Counter with Reset:** Tells you instantly what part of tape is playing.

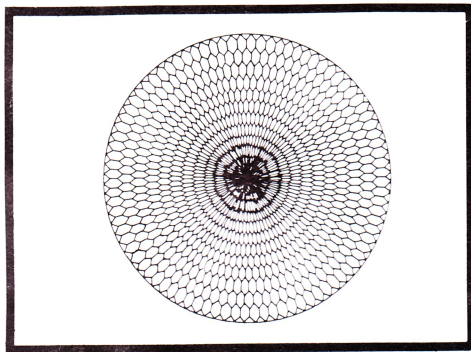
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Series



# Honeycomb disc tower speakers

Sound takes on a new shape.

MCS proudly displays the flat honeycomb drivers of our newest speakers. A new shape that takes sound beyond the range of traditional cone-shaped speakers to capture the full energy of today's recording technologies. Reducing distortion to create a true sound. And aligning acoustic centers to create a natural phase linearity.



Flat honeycomb driver

**8290 Speakers feature:**

**9" Honeycomb Disc Woofer with 15.59 oz. Ferrite Magnet:**  
For big bass and dramatic presence.

**2" Honeycomb Disc Midrange with 8.3 oz. Ferrite Magnet:**  
For clarity and spaciousness throughout midrange frequencies.

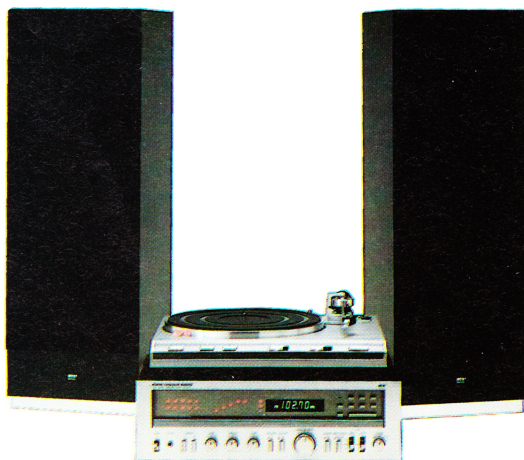
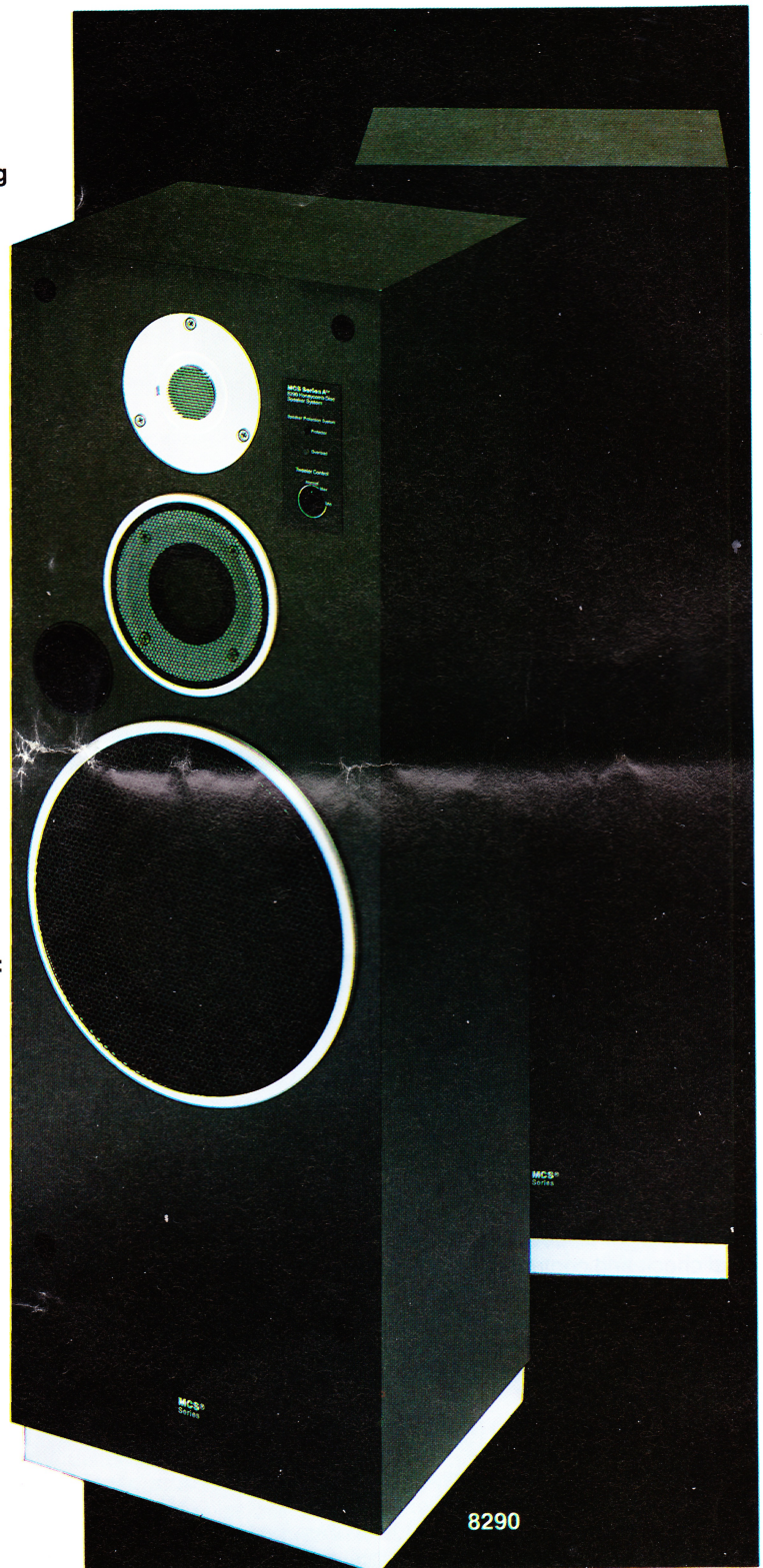
**1 1/8" Honeycomb Disc Tweeter with 4.43 oz. Ferrite Magnet:**  
For bright highs, wide treble dispersion.

**2" Bass Port:** Maximizes efficiency.

**Tweeter Control:** Expand and reduce frequency to taste and to "tune" your listening room.

**Power Capability:** Amplifiers to 85 watts RMS.

**Dimensions:** 33"Hx9"Dx11"W.



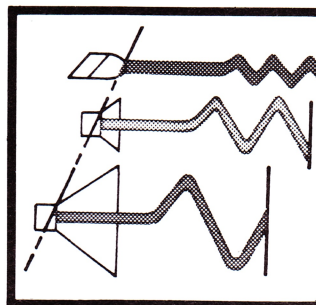


# Linear phase speakers

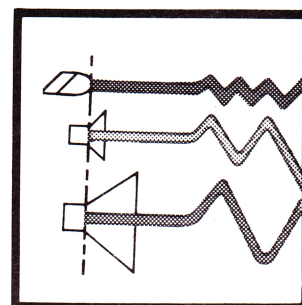


## Putting sound waves in sequence.

Linear phasing is a design that puts each speaker core in a straight vertical relation to each other. Allowing sound waves to reach your ears at precisely the same time, "in phase," not at random. Reproducing instruments and voices with such clarity and definition that they seem to follow you around the room.



Traditional speakers



Linear phase speakers

### 8330 Speakers feature:

**3-Way Linear Phase Crossover Network:** Minimizes coloration and improves transient response.

**12" Woofer with 20-oz. Ferrite Magnet:** Bass you can feel; efficiency, accuracy, minimally-distorted range.

**5" Midrange with 5.3-oz. Magnet:** Wide dispersion of sound in vocal range.

**2" Tweeter with 3.2-oz. Magnet:** Cone design brings out shivering highs and wispy nuances at your favorite volume levels.

**Tweeter and Midrange Controls:** Adjust for room acoustics, suit the music you're playing (e.g. you may want greater lows for organ than for flute).

**Bass Reflex Port:** Maximizes woofer efficiency.

**Power Capability:** Amplifiers to 120 watts RMS.

**Dimensions:** 15"Wx26<sup>5</sup>/<sub>8</sub>"Hx13"D.

### 8320 Speakers feature:

**Frequency Response 32-22,000 Hz:** Delivers seldom-heard low frequencies.

**10" Woofer with 11.6-oz. Magnet:** Brings same astonishing clarity to the bass as this MCS speaker achieves in the treble.

**5" Cone Midrange with 5.3-oz. Magnet:** For spacious presence and transparency.

**2" Cone Tweeter with 3.2-oz. Magnet:** For vivid imaging.

**3-Way Linear Phase Crossover Network:** Insures woofer, midrange and tweeter don't speak out of place.

**Power Capability:** Amplifiers to 75 watts RMS.

**Dimensions:** 13<sup>3</sup>/<sub>8</sub>"Wx24"Hx12<sup>1</sup>/<sub>4</sub>"D.



# High-efficiency speakers

## Make every note worthy.

You get it all. Every sound. Clean and clear. Loudspeakers crafted with high-frequency drivers. Soft-dome tweeters for crystal-clear harmonics. Midrange soft-domes that pick up the softest flute. Woofers that make the darkest boom of the bass drum distinct. A sound always pure and accurate. Perfectly defined.

### 8232 Speakers feature:

**12" Woofer with 16 oz. Ferrite Magnet:** Chosen for big bass and dramatic presence (handles up to 100 watts with minimal distortion).

**1½" Softdome Midrange:** Provides wide dispersion of midrange frequencies.

**2" Tweeter with 2 oz. Ferrite Magnet:** For clarity and crispness in high frequency sounds.

**Tweeter and Midrange Controls:** Allows you to customize sound for the acoustics in your room.

**1½" Bass port:** Maximizes bass tones even at low input.

**Dimensions:** 15"Wx27"Hx10½"D.

### 8231 Speakers feature:

**8" Woofer with 3.6 oz. Magnet:** For a strong bass range.

**3½" Midrange with 2 oz. Magnet:** For clear voice frequencies.

**2½" Tweeter with 1.76 oz. Magnet:** Gives you vivid highs.

**2" Tuned port:** Increases bass efficiency.

**Dimensions:** 13"Wx23"Hx9"D.

### 8229 Speakers feature:

**10" Long-Throw Woofer with 12 oz. Ferrite Magnet:** High performance magnet increases bass range and presence.

**1½" Softdome Midrange with 12 oz. Magnet:** For clarity and spaciousness throughout midrange (voice) frequencies.

**2" Cone Tweeter with 3 oz. Magnet:** For bright highs, wide treble dispersion.

**2" Bass Port:** Maximizes efficiency.

**Tweeter Control:** Expand and reduce frequency to taste and to "tune" your listening room.

**Dimensions:** 14½"Wx26"Hx10½"D.

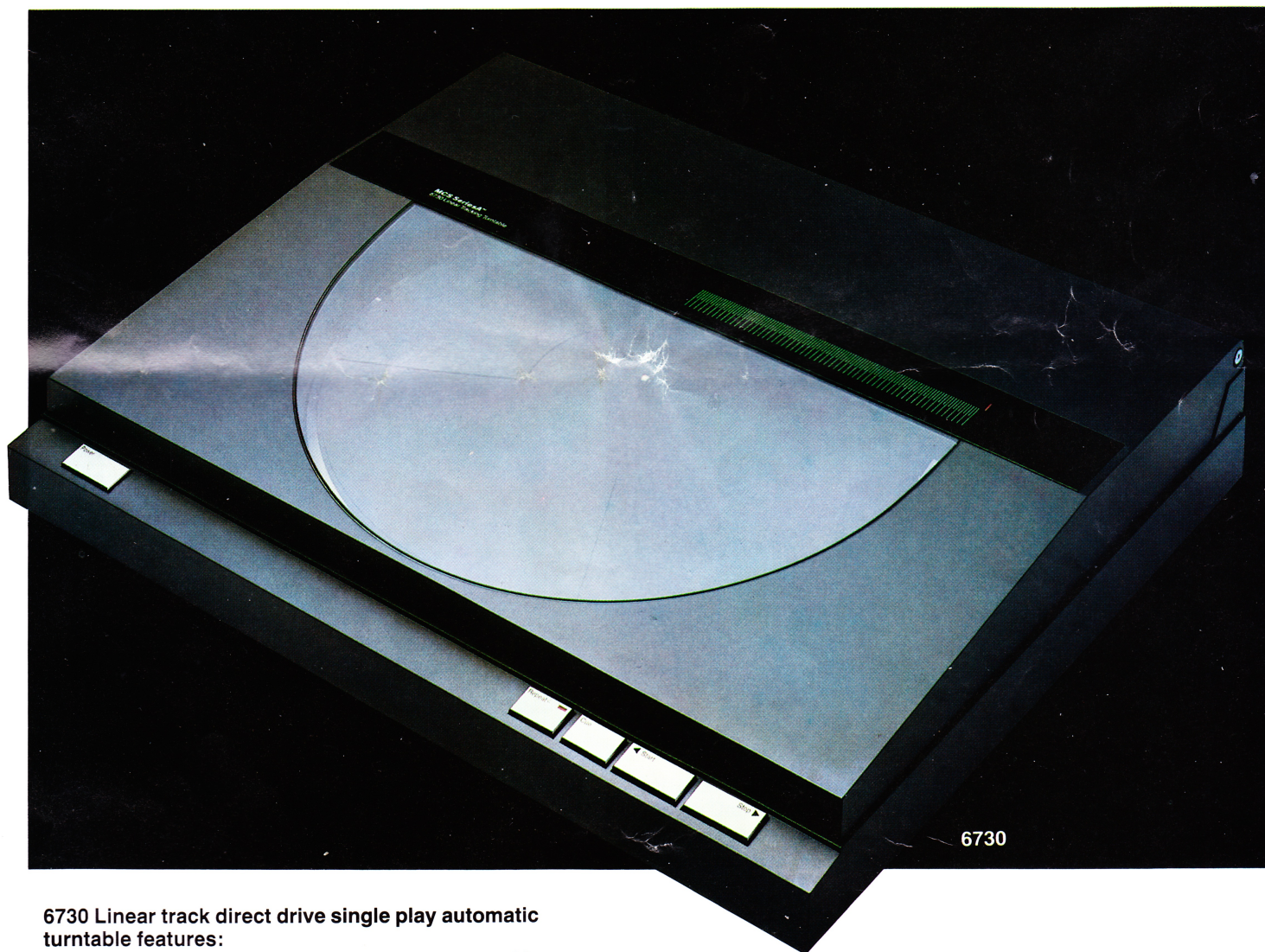




# Linear track turntable

For the sound you don't hear.

You measure a quality turntable not by the sound it makes, but by the sound it doesn't make. That's why MCS turntables are kept quiet. Superior design and careful engineering reduce the effect of fluctuations in platter speed and acoustic feedback. So the only sound you hear is the sound of true-to-life music.



**6730 Linear track direct drive single play automatic turntable features:**

**Dynamically balanced linear tracking tone arm:** Moves straight across the platter at 90° angle with virtually 0% tracking error. Stylus has ideal contact with record grooves.

**Micro Computer and Optoelectronic Control:** Eliminates drift and gives accurate operation.

**Direct Drive:** Ensures a constant platter speed because the platter is part of the motor.

**Automatic Record Size Select:** Automatically adjusts platter speed to record size.

**Electronic Front Panel Control Center:** For easy, smooth operation.

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Series



# Direct drive turntables



## 6720 Direct drive single play automatic quartz lock turntable features:

**Quartz Locked:** Phase lock loop detects minute variations in platter speed, sending the electronic circuit controlling turntable rotation corrective information continuously, for uniform speed accuracy.

**Direct Drive DC Servo Motor:** Our quick start/stop high-torque system teamed up with quartz-lock monitoring circuits reduces wow and flutter to 0.025%.

**Strobe Light:** Continuous speed monitoring.

**Single Play:** Tone arm returns, stops at end of record.

**Front Control Cue Lever:** Now positioned for operation even when dust cover's closed.

## 6603 Direct drive single play semi-automatic turntable features:

**Direct Drive:** Ensures a constant platter speed because the platter is part of the motor.

**DC Servo Motor:** Helps provide excellent signal to noise ration for quiet operation.

**Strobe Light:** Indicates correct speed (pitch) adjustment.

**Other Features:** Low mass straight tubular tone arm, damped cue/pause control, manual spindle, front controls for easy operation.



# Belt drive turntables



## **6710 Belt drive multiple play fully automatic turntable features:**

**Multiple Play:** Lets you stack six records at a time.

**DC Servo Motor:** Reduces speed drift, built to minimize wow and flutter.

**Strobe Light:** Accurate speed indicator.

**Pitch Control:** Lets you adjust platter speed to achieve exact pitch you prefer. Compensates for any belt wear and stretching to achieve correct  $33\frac{1}{3}$  or 45 RPM speed.

**Plywood base:** Helps minimize vibration from speaker output.

## **6502 Belt drive single play semi-automatic turntable features:**

**DC Servo Motor:** A smooth and quiet-running motor built to minimize wow and flutter.

**Strobe Light:** Accurately indicates platter speed.

**Pitch Control:** Allows adjustment in speed to serve your special needs.

**Plywood Base:** Helps minimize vibration from speaker output.

**Audio Insulators:** "Shock absorber" feet help minimize record skips due to vibration.

## **6202 Belt-drive single play semi-automatic turntable features:**

**DC Servo Motor:** Designed to maintain constant speed, even if a sudden fluctuation in voltage occurs.

**Low Mass Tubular Aluminum Tone Arm:** Built lighter to help eliminate rumble.

**Anti-Resonant Base:** Virtually does away with vibration and other interferences.



# Specifications

	Receivers					Amplifiers		Tuners		Casseiver
Model	3226	3236	3249	3260	3285	3822	3860	3722	3760	3434

## AMPLIFIER SECTION

Output Power RMS	25W	35W	45W	60W	85W	20W	60W	N/A	N/A	25W
Impedance	8 ohm	8 ohm	8 ohm	8 ohm	8 ohm	8 ohm	8 ohm	N/A	N/A	8 ohm
Power Band Width $\pm 3dB$	20-20,000 Hz	20-20,000 Hz	20-20,000 Hz	20-20,000 Hz	20-40,000 Hz	20-20,000 Hz	20-20,000 Hz	N/A	N/A	20-20,000 Hz
Total Harmonic Distortion	0.04%	0.04%	0.02%	0.02%	0.005%	0.1%	0.05%	N/A	N/A	0.9%

## PHONO

Frequency Response $\pm 3dB$	20-20,000 Hz	20-20,000 Hz	20-20,000 Hz	20-20,000 Hz	20-20,000 Hz	20-20,000 Hz	20-20,000 Hz	N A	N A	30-20,000 Hz
Phono Overload	100mv	120mv	150mv	190mv	150mv	150mv	160mv	N A	N A	150mv
S/N Phone (2.5mv)	75dB	70dB	75dB	77dB	80dB	75dB	80dB	N A	N A	60dB
IM Distortion	0.04%	0.04%	0.02%	0.02%	0.01%	0.03%	0.01%	N A	N A	0.09%

## FM SECTION

Frequency Response $\pm 3dB$	20Hz-17KHz	20Hz-15.5KHz	20Hz-14KHz	20Hz-16.5KHz	20Hz-15KHz	N/A	N/A	30Hz-12KHz	20Hz-15KHz	30Hz-15KHz
Usable Sensitivity	2.0uv	2.0uv	1.9uv	1.9uv	1.9uv	N/A	N/A	1.9uv	1.9uv	1.5uv
Capture Ratio	1.5dB	1.5dB	1.2dB	1.0dB	1.0dB	N/A	N/A	1.5dB	1.0dB	3.0dB
Image Rejection	45dB	45dB	80dB	80dB	75dB	N/A	N/A	43dB	55dB	50dB
Stereo Separation	40dB	40dB	45dB	45dB	45dB	N/A	N/A	30dB	40dB	35dB
Quieting Sensitivity	4.0uv	4.0uv	4.0uv	4.0uv	3.5uv	N/A	N/A	4.5uv	3.5uv	3.0uv
Mono THD	0.2%	0.2%	0.1%	0.1%	0.1%	N/A	N/A	0.2%	0.08%	0.4%
Stereo THD	0.35%	0.35%	0.2%	0.15%	0.15%	N/A	N/A	0.4%	0.15%	1.2%

## AM SECTION

Sensitivity (UV/M)	300	300	300	300	300	N A	N A	300	300	400
Selectivity (dB)	30	30	32	45	45	N A	N A	30	45	30
S/N Ratio (dB)	45	45	50	74	50	N A	N A	47	45	45
Weight	12 lbs.	13 lbs.	25 lbs.	25 lbs.	30 lbs.	9 lbs.	16 lbs.	7 lbs.	5 lbs.	20 lbs.

	Turntables					
Model	6202	6502	6710	6603	6720	6730
Drive Mechanism	Belt	Belt	Belt	Direct	Direct	Direct
Play Capabilities	Semi-auto	Semi-auto	Fully-auto	Semi-auto	Fully-auto	Fully-auto
Cartridge Type	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic
Frequency Response $\pm 3dB$	20-18 KHz	20-20 KHz	20-25 KHz	20-20 KHz	20-20 KHz	10-30KHz
Cartridge Output Level	5.8mv	2.5mv	4.7mv	2.5mv	2.5mv	2.5mv
Channel Separation (dB)	26	22	22	22	22	22
Channel Balance	1.0dB	2.0dB	2.0dB	2.0dB	1.8dB	1.8dB
Wow/Flutter	0.12%	0.05%	0.05%	0.03%	0.025%	0.025%
Rumble	-62dB	-65dB	-64dB	-73dB	-78dB	-78dB
Speed Deviation	0.19%	0.16%	0.16%	0.14%	—	0.06%
Tracking Error	4.0°	3.5°	3.5°	2.5°	2.5°	0.1°
Tone Arm Length	8.46	8.65	9.06	9.06	9.06	4.25

RUMBLE MEASUREMENT PER DIN B SPECIFICATIONS



# Specifications

	Speakers					
Model	8231	8229	8320	8290	8232	8330
Woofer size	8"	10"	10"	honeycomb 9"	12"	12"
Magnet weight	4.6 oz.	12 oz.	11.6 oz.	15.6 oz.	16 oz.	20 oz.
Midrange size	3"	1 1/2"	5"	2"	1 1/2"	5"
Midrange type	cone	soft dome	cone	honeycomb disc	soft dome	cone
Magnet weight	2 oz.	12 oz.	5.3 oz.	8.3 oz.	12 oz.	5.3 oz.
Tweeter size	2 1/2"	2"	2"	1 1/8"	2"	2"
Tweeter type	cone	cone	cone	honeycomb disc	cone	cone
Magnet weight	1.76 oz.	2 oz.	3.2 oz.	4.4 oz.	2 oz.	3.2 oz.
Power capacity*	10-30W	10-60W	10-75W	10-85W	25-100W	25-120W
Crossover controls	—	Tweeter	Tweeter	Tweeter	Tweeter/Mid	Tweeter/Mid
Bass reflex port	Yes	Yes	Yes	Yes	Yes	Yes
Impedance	8 ohm	8 ohm	8 ohm	8 ohm	8 ohm	8 ohm
Crossover frequency	800-4000Hz	700-8000Hz	1700-5500Hz	1800-3500Hz	700-8000Hz	1500-3800Hz
Weight	16 lbs.	36 lbs.	28 lbs.	30 lbs.	45 lbs.	38 lbs.
Dimensions (WxHxD)	13x23x9"	13x25x10 1/2"	13x24x12"	11x32x9"	15x27x10 1/2"	15x27x13"

\*Compatible with amplifiers rated to deliver this amount of power RMS per channel

	Stereo cassette decks								Casseiver
Model	3541	3543	3522	3554	3555	3549	3588	3575	3434
Track system	4 track 2CH	4 track 2CH	4 track 2CH	4 track 2CH	4 track 2CH	4 track 2CH	4 track 2CH	4 track 2CH	4 track 2CH
Tape speed (IPS)	1 7/8"	1 7/8"	1 7/8"	1 7/8"	1 7/8"	1 7/8"	1 7/8"	1 7/8"	1 7/8"
Wow & flutter	0.045%	0.05%	0.08%	0.08%	0.09%	0.04%	0.045%	0.06%	0.15%

## FREQUENCY RESPONSE

Playback (Normal $\pm 3$ dB)	40-14KHz	31.5-14KHz	31.5-12.5KHz	40-14KHz	50-13KHz	30-15KHz	31.5-14KHz	30-14KHz	100-12.5KHz
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## PLAY/RECORD FREQUENCY RESPONSE

CRO2 ( $\pm 3$ dB)	30-12KHz	50-14KHz	30-14KHz	40-12.5KHz	50-14KHz	25-16KHz	32-12.5KHz	40-15KHz	100-12.5KHz
Metal ( $\pm 3$ dB)	30-14KHz	50-15KHz	30-14KHz	40-12.5KHz	50-15KHz	25-17KHz	40-15KHz	40-18KHz	100-12.5KHz

## S/N RATIO

	DOLBY B/C								
CRO2 Dolby on	60dB	62dB	58dB	58dB	60dB	66/74dB	61dB	58dB	60dB
Metal Dolby on	60dB	62dB	58dB	58dB	60dB	68/76dB	61dB	58dB	60db
Norm. Dolby on	60dB	60dB	58dB	58dB	60dB	66/77dB	61dB	58dB	60dB
Weight	7 lbs.	8 lbs.	9 lbs.	13 lbs.	9 lbs.	11 lbs.	10 lbs.	14 lbs.	—



Record Level Right  
Left 5 6 7 8 9 10  
Input Line Mic  
DOLBY B+C NR

Up  
6 7 8  
Tuning  
Down  
Acoustic Processor  
Up  
+ - L R  
Bass Treble Balance Volume  
Down

Frequency  
103.5 MHz  
Signal Strength  
5 4 3 2 1  
FM Stereo  
Quartz Locked  
Power Output  
0.02 0.2 1 4 20 85 150 W/80  
Left Right  
Acoustic Level  
Bass + Treble + Volume  
Att. dB  
10

JCPenney

Record Level Meter  
Right  
-20 10 7 5 3 0 3 5 +  
dB  
0 20 40 60 80 100 120  
rec  
Left  
Record Level Right  
4 5 6 7 8  
Microphone Left

